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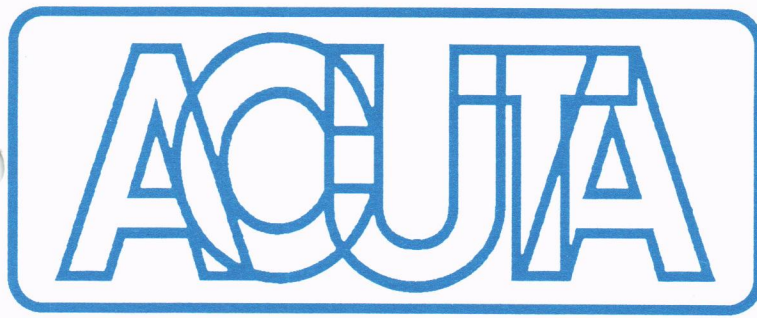
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THE VOICE OF
TELECOMMUNICATIONS
IN HIGHER EDUCATION

NEWS

Association of College & University Telecommunications Administrators

June 1994

ACUTA to FCC: Stop 800 pay-per-call

In a letter dated April 13, 1994, Randy Collett, ACUTA Executive Vice President and Chairman of the Regulatory and Legislative Affairs Committee, called the attention of the FCC to the issue of fraudulent 800 numbers.

The letter, addressed to Kathleen Levitz, Chief, Common Carrier Bureau, FCC, began with an introduction to ACUTA and who the Association represents. Collett then described the method used by "adult" phone lines which continues to result in hundreds of thousands of dollars in losses on campuses across North America.

"Instead of '900' numbers," Collett wrote, "there are now hundreds of '800' numbers listed for pay-per-call services. Callers to these numbers are identified by Automatic Number Identification (ANI), and since 800 calls bypass the Line Information Data Bases (LIDB), screening codes are ineffective.... It makes no difference whether the caller has established a billing arrangement with the provider;... it's the 'owner' of the telephone number who will be responsible for the bill."

Collett's letter detailed the nature and scope of the problem, pointing out that the FCC regulations as written are contributing to the problem

and that colleges and universities are not the only victims of this abuse:

"It is troubling to ACUTA members that the FCC continues to allow this type of billing arrangement under the circumstances whereby the customer-of-record and the service provider have no business relationship. Indeed, with the Commission's most recent rule making in CC Docket #91-281, FCC 94-59, there is a specific exception related to delivery of per-call blocking of CPN for calls made via 800 or 900 service."

In the final paragraphs of the letter, Collett suggested a course of action that would put an end to this type of fraud:

Prohibit the use of "800" numbers for any interstate pay-per-call services. Also, prohibit the issuance of any telephone calling cards for these types of services without the express permission of the customer-of-record of the telephone line being used.

If total prohibition is not feasible, the letter suggested the following compromise:

Prohibit Local Exchange Companies (LECs) from billing for pay-per-call services without

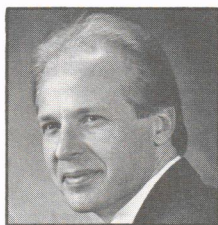
See "Letter to FCC..." on page 5

Five candidates prepare for elections

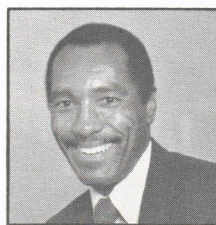
Coley Burton
ACUTA Immediate Past President

In November, 1993, the Board of Directors approved certain changes to ACUTA's bylaws. Among those

changes was the elimination of the position of Regional Director and the creation of a new position, Director-at-Large. According to the new bylaws, four of the five Directors-at-



Robert Aylward



Jim Cross

Large are to be elected and one appointed by the Board. Complete transition to comply with the new bylaws will be accomplished in 1995.

Accordingly, this month you will be asked to vote for either Robert Aylward or Jim Cross for the new position of Secretary/Treasurer, and for two new Directors-at-Large.

See "Elections..." on page 8

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Board Report

ACUTA Board endorses no dues increase for fiscal year 1994-95

Holding the line on expenses and operating within our means was the topic of priority for the May ACUTA Board meeting. The Board was briefed on the Finance Committee meeting held April 23 to finalize fiscal year '94-'95 budget planning parameters. The committee recommended and the Board endorsed no dues increase for fiscal year '94-'95.

Other key items on the agenda included:

- Update on the recruitment of a new ACUTA Executive Director
- Member needs assessment report status
- Fiscal year '94-'95 nominations and elections
- Fall '95 seminar in Fort Worth, Texas
- Anaheim conference planning
- New membership campaign
- Baltimore seminar assessment

Submitted by
Dr. James Cross, Michigan Tech
ACUTA Secretary

Host school needed for Richmond

Recognizing that ACUTA is a volunteer-driven organization, every attempt is made to increase the number of our members who participate in the functions of the Association. Accordingly, at each ACUTA event, institutional members are given the opportunity to act as "hosts."

The responsibility of the host school is primarily to familiarize attendees and their families or guests with the location of the event, providing information about the immediate area and local points of interest. To accomplish this, the host school staffs a greeting booth or table at the Sunday evening reception and during coffee breaks at the Conference. Some hosts have held drawings for mugs, T-shirts, and other campus-related items as prizes for those who come by the booth and register.

In addition to the duties during the Conference, the host also works with the ACUTA staff to prepare two letters, one to be sent to potential attendees and a "welcome" letter for attendees.

The Board has authorized one complimentary registration to the event for which a school serves as a host.

If you would be interested in serving as host at the Richmond, Virginia seminar in October, please contact Lisa Cheshire in the ACUTA office by June 24.

8th Monograph published

ACUTA members received the latest in the monograph series early in June: *Telecommunications Disaster Avoidance and Recovery* by Randy Wanciak, Manager of Central Campus Telecommunications at Yale University.

The Publications Committee urges each member to read the monograph and send us your comments by completing the evaluation sheet found on the last page of the booklet. Your input is extremely valuable as plans are made for future topics to be explored.

Association of College and University Telecommunications Administrators ACUTA NEWS, Volume 23, No. 6

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President's Message

It has been a very busy month for ACUTA as well as for me in my "real job" here at Cornell. The Baltimore seminar is history, and

it more than lived up to our expectations. We had a record number of attendees for the seminar sessions—263, to be exact—and 19 exhibitors, a near record. Cable TV is obviously a very important issue on campuses today; likewise, everyone's always eager to get updates on the smattering of "hot management topics" of general interest to everyone these days. I saw a lot of familiar faces in Baltimore that I haven't seen at ACUTA in a while—it was great to see those folks return. The weather was absolutely gorgeous yet "attrition" was not a problem. The sessions remained packed throughout the three days, a further testament to the valuable information being disseminated.

The Search Committee interviewed candidates for our Executive Director on May 23, and we hope to have good news for the Board, staff, and membership soon. It has been a long, arduous process, but we want to make sure that the candidate chosen will be the right one. There are no guarantees, of course, but the quality of the applicants has been excellent and there has been no dearth of interest in the position.

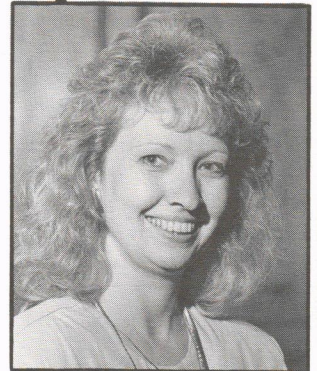
While I was in Lexington, I got to see our name on our new building. (And you thought it was already there from the picture in the March newsletter, didn't you? We only made it look that way through the marvels of the computer and a bit of editorial license!) The interior of the building, however, was in terrible disarray as it is "under construction." We had to move into the building within a few days of closing, and it has taken several weeks to get the local building permits to convert it from physicians' offices to an ACUTA office. It's not major construction—just moving some walls—but it sure is noisy and messy! It will be exciting, though, to see the "finished product," and I'm sure the staff will be glad when they can finally get settled.

Here on campus, we are faced with tremendous changes in the coming months. The President of Cornell, Frank H. T. Rhodes, has recently announced his retirement. Dr. Rhodes has led the University since 1977. A few weeks ago we also learned that M. Stuart Lynn, our Vice President for

Information Technologies for the past six and one-half years, has resigned to relocate to the West Coast, effective July 1. As you know from my previous articles, my group is part of Information Technologies so we are preparing, as best we can, for the period of uncertainty and change that inevitably takes place with such major management shifts. In other words, opportunities abound! Just yesterday it was also announced that Dave Lambert, our (Network Resources) director, has been named Acting Vice President while a search is conducted to replace Dr. Lynn. We're very pleased for Dave and happy to know our concerns will be well represented, but we will miss having him here among us.

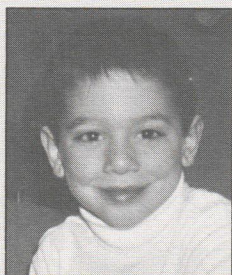
Without Dave's and Stuart's support, I would not have been able to fulfill my ACUTA responsibilities over the past several years. I am happy for the new opportunities this affords each of them and would like to take this opportunity to publicly thank them, as well as my staff, for not only allowing me, but encouraging me, to serve ACUTA.

On a final note, the Program Committee and Lexington staff are deeply involved in the final planning for our 23rd Annual Conference coming up in Anaheim, California, July 31–August 4. As is always the case, we are working hard to continue to improve over previous years' conferences and hope to provide you with an excellent forum for both formal and informal learning opportunities. Make your plans now and I hope to see you—yes, YOU!—there!



Patricia Searles

ACUTA President



John Guigliano needs our help!

As those who attended our seminar in Baltimore already know, 5-year-old John Guigliano III has acute lymphocytic leukemia and is awaiting a bone marrow transplant. John is the nephew of Tony Tanzi, Director of Telecommunications at Brown University and an active member of ACUTA who has served on the Program Committee and as a State Coordinator.

Through all John has endured, he is still very much a wonderful, smiling little boy. He has been under the care of the Pediatric Oncology Department of The Rhode Island Hospital for the past two years. He is still under their care, but is expected to go to Minnesota for his bone marrow transplant. His family expects to spend up to five months in Minnesota after the procedure is done.

Of course, beyond the obvious physical and emotional pain John and his family go through, an added burden—cost—has begun to take its toll. The total cost is estimated at about \$300,000. Insurance will cover only part of this. Whatever we as ACUTA members and friends could do to assist this family would be appreciated.

*Send contributions (any amount appreciated) to:
John Guigliano III Fund, c/o Louis Flore, 125 Wayland Ave.,
Providence, RI 02906.*

A handwritten signature in dark ink, likely of Louis Flore.

Conference adds Highlight Session and official closing

Think you can cover the ACUTA Annual Conference in three days, leave early Thursday morning, and not miss anything? Better look again at your itinerary.

Just when you thought the ACUTA Conference was so jam-packed with information it couldn't possibly get any better, the Program Committee adds another great speaker and an exciting closing to the final half day.

Previous conferences have had three Highlight Sessions in addition to the Keynote Address. This year, a fourth Highlight Session will give us a strong finish on our last day with Joe Calloway's presentation, *Positive About Change*. You'll understand why Calloway is one of the most popular speakers in North America as you go home in the right frame of mind to deal with almost any challenge.

Our official closing promises to be an event in itself, with prizes and surprises for deserving ACUTA members.

Other good reasons for joining us in Anaheim include:

- Keynote Address by Scott McKain
- 4 Highlight Sessions featuring speakers of national acclaim
- 40 different breakout sessions on a variety of topics
- More than 70 vendor exhibits
- The famous ACUTA Network

Moderators and Monitors needed at Conference

Volunteers are being sought to serve as moderators and monitors at each session of ACUTA's 23rd Annual Conference in Anaheim.

Moderators meet their session's speakers in the speaker ready room and escort them to the meeting room. Brief biographical information is provided to moderators in advance to facilitate introduction of the speakers. The moderator may supplement these biographical sketches with information gathered personally from the speakers.

If speakers entertain questions after their presentations, moderators may preside as questions are asked, unless speakers wish to do this themselves.

Monitors distribute evaluation forms to all attendees as they enter and collect them as the attendees exit. The monitors also count the number present and deliver the completed forms to the speaker ready room.

A complete set of instructions will be provided to moderators and monitors at a meeting on Sunday, July 31.

Positions are assigned on a first-come, first-served basis.

If you're interested in serving the Association in either of these capacities, contact Lisa Cheshire in the ACUTA office before June 24.

23rd Annual Conference & Exposition July 31 – August 4 • Anaheim, California "Telecommunications: Fast Track to the Future"



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Keynote Speaker

Scott McKain

Just Say Yes: A Step Up to Success

Highlight Sessions

Dr. Patricia Zigarmi

Developing Excellence in Ourselves and Others

Annette Leal

The Info Superhighway: How Are Your On-Ramps?

Roger Dawson

The Confident Decision Maker

Joe Calloway

Positive About Change

Publications Committee considers White Papers and Blue Papers

The Publications Committee presents for your consideration the concept of Blue Papers and White Papers. By working definition, a Blue Paper is a document of no more than one page which addresses a topic of a technical nature, providing hands-on advice for a problem typical of those faced by college telecommunications departments.

By contrast, a White Paper is a document of no more than one page, but which addresses a management-oriented issue. Next month, the *ACUTA News* will publish a potential White Paper for your consideration.

The Publications Committee asks that you read the following article and direct your comments or questions about the concept of White Papers or Blue Papers to Dave O'Neill, Pat Scott, or anyone else on the committee. If you have topics to suggest for this potential series, the committee welcomes your ideas.

Patch Panels Can Be Handy

Dave Barta, University of Oregon

Many of those who are comfortable with a punch down tool look at patch panels with a jaundiced

They can limit the ability to split pairs and reduce the flexibility available with installed cable. In addition, they are harder to establish than traditional cross-connect fields and are more expensive. They shine, however, in situations where a few voice or data ports may be needed on a sporadic basis in a large number of locations.

The conference rooms in the Student Union at University of Oregon are a good example. The

union has 20 conference rooms but never has a combined demand for more than four dialtones to them in any one day. They neither want to pay for twenty dialtones nor want to pay technicians to shift dialtones around every day or two. (The techs have better things to do, too.)

Their AV tech had learned just enough about telephone wire to be dangerous, playing in telecom's cross-connect fields with pliers and sometimes bridging dialtones with alligator clips. A patch panel allowing them to move four dialtones around the twenty rooms just by shifting line cords has been a nifty answer to the problem. Now they leave the wire alone—and have the flexibility they need.

Another example involves videoconferencing through digital ports on the PBX. We have tried to limit the number of rooms on campus from which we will do videoconferencing but still have enough rooms wired and available—dedicating ports for every room is expensive. Plus, other schools in our state system want to have us in their videoconferencing speed dialing lists but can't do it if we have 30 potential numbers.

Having our techs change the crossconnects at the main distribution frame (MDF) to daily move a few ports around to the various conference rooms clearly wasn't the answer. Establishing a patch panel at the MDF has allowed our videoconferencing coordinator/trainer (who is not a tech) to easily move a few ports around to conference rooms as needed.

...Letter to FCC

Continued from page 1

express, written confirmation that some sort of billing arrangement exists between the customer-of-record and the service provider (and/or their billing agent).

The letter ends with a plea for serious consideration for our concerns and an offer to participate in finding a solution:

ACUTA encourages the FCC to confirm the seriousness of this situation, and to take immediate steps for resolution. We welcome the opportunity to be an integral part of that process.

From toll fraud to call accounting to new bills in House and Senate, ACUTA's Regulatory and Legislative Affairs Committee has faced a number of significant challenges this year. In this issue of the *ACUTA News*, you'll find a related story on page 6, along with Whitney

Johnson's *DC at a Glance* column on page 11.

If you are protecting your school's budget by blocking 800 numbers that are billed back to the university, ACUTA will be happy to provide you with our most up-to-date list of numbers reported to us by other members. The list is now several pages long, too long to print in the newsletter. Contact Pat Scott or Kevin Adkins in the ACUTA office for a copy.

ACUTA President, Pat Searles of Cornell University, offered a suggestion for those who are experiencing difficulty with companies who offer "adult" phone lines that are billed to campus phones. When she recently reminded one such company that many of the university students were under the age of 18, the company hastily changed its attitude about cooperating to put an end to calls from the campus.

If you have additional suggestions or solutions that might benefit other members, the *ACUTA News* would like to hear from you.

TFS takes aim at toll fraud

David Jordan
MCI, Co-Chairman of ICIC-TFS

Four times each year, and more often as necessary, representatives from AT&T, LDDS Metro Media, MCI, Sprint, WILTEL, and several other long distance companies leave their competitive hats at home and meet to discuss an issue that plagues carriers and campuses everywhere: Toll Fraud and Telabuse.

The Interexchange Carrier Industry Committee-Toll Fraud Subcommittee (ICIC TFS) was founded in 1993 by several of the largest long distance carrier members of the ICIC. Its mission: to work cooperatively to resolve toll fraud issues in a timely manner. Their qualifications: LDDS Metro Media sends a regulatory attorney and a telefraud detection expert. Fraud investigations experts who are also switch engineers and technicians come from AT&T and WILTEL. MCI sends advanced services systems experts who are product integrity and fraud prevention experts as well. The representatives from Sprint are billing and collections managers who specialize in fraud detection. Together the

team is action-oriented, task-driven, and intolerant of bureaucracy.

The ICIC TFS primarily addresses matters that are (or will be) on the agenda of the NOF Toll Fraud Prevention Committee (NOF TFPC): Governmental requests and mandates for interexchange

In all cases, the fraud could have been significantly reduced or prevented had the university/college telecom administration been aware of the necessary fraud prevention features provided by their local exchange carrier.

industry consensus regarding technical solutions to fraud prevention and other noncompetitive technical issues related to unauthorized network access.

In the course of business this year, the TFS discussed several occurrences of aggregator operator-assisted toll fraud which were directly related to university/college dormitory telephone fraud. In all cases, the fraud could have been significantly reduced or prevented had the university/college telecom administration been aware of the necessary fraud prevention features provided by their local exchange carrier.

The fraud scenario goes like this:

College XYZ is in the process of implementing equal access according to the FCC mandate which requires that the college, as an aggregator, open up its dormitory phones to equal access by 1996. The college telecom manager calls his PBX vendor to schedule a maintenance update which will enable equal access dialing from the dorm phones. He thinks his work is done with this simple request. There is no PIC

change required, so there is no interaction between the telecom manager and the PIC carrier, nor are additional features purchased from the local carrier.

The PIC'd carrier has two methods of screening calls to the dorm lines: either a proprietary list of all the associated ANIs at the college or a screening data base provided by the local carrier. In both cases the college or university has taken steps to block toll charges to those ANIs. The blocking will either be implemented by the local carrier or the PIC'd long distance carrier. Usually the LD carrier will request that the college implement local carrier features to block certain toll types of calling, etc.

In many cases, the college telecom manager will request toll charge blocking from the local exchange carrier. What some of the long distance carriers have seen recently is that telecom managers from some very large universities have *not* ordered local toll blocking (toll billing exclusion-TBE) for all the phones on campus, and when the dorm phones are cut to equal access, the only foolproof screening capability is that provided by the PIC'd long distance carrier—the only carrier who has a complete list of the college line numbers. Remember, after equal access, each and every line at the college is open for toll. The in-bound toll calls are no longer routed through a few lead numbers in the campus PBX. It isn't good enough to have just the main lead number listed as toll restricted. The other access carriers have no indication that the remaining dorm lines should be toll denied.

As the long distance carriers have seen in the past, once the student population most likely to perpetrate fraud becomes aware of the shortcomings of the college/dormitory PBX, rampant toll abuse occurs. Some cases have run as high as several hundred thousand dollars.

At first, it may seem as though both the college and the alternative long distance carriers were blind-sided. But the fraud and the ill will that frequently develops between the educational institution and the carrier attempting to collect for the traffic are easily preventable.

A simple solution exists for those who watch out for the bottom line. College and university telecom managers should request from their local exchange carriers line features that provide them with toll billing exclusion (TBE) and restricted line identification (information digits). In this way, equal access carriers will be technically empowered to block toll from these targeted numbers. Trying to cut costs by not purchasing appropriate screening features (globally, for all

Toll fraud...

Continued from page 6

campus lines) can become a costly mistake for the university in the long run.

Toll billing includes collect, billed-to-third-party, and operator-assisted station-paid calls. Industry practice is that carriers verify authorization for billing a number by launching a query to a LEC data base that contains all issued line numbers (Line Identification Data Base-LIDB). This data base will indicate whether a call can be billed to a specific line number. So, if the college line numbers are listed in the LIDB as TBE, this indicator will enable the long distance carrier to reject requests to bill calls to those line numbers.

Information digits or automatic number identification information digits (ANI II digits) work in very much the same way. When a call is originated from a line number which has been labeled by the local carrier with an ANI II that indicates the line number is restricted for toll, a carrier will not allow calls to be billed directly to that line number. ANI II digits are part of the signalling information that is passed between the local carrier and the long distance carrier when LD access is requested by the calling party.

Six months ago, the ICIC-TFS members raised this issue with the NOF TFPC in an effort to have the local carriers produce a customer education program that addresses these types of concerns. Discussions are still taking place in that forum.

The consequences of this form of abuse are broad and serious, with monetary, ethical, and even legal ramifications. Working together, we will formulate and implement preventative measures that address campus and carrier concerns. The TFS welcomes input or questions from ACUTA members. Contact one of the Co-chairmen of the ICIC-TFS: MCI's David Jordan at (202) 887-2700 or AT&T's Richard Petillo at (908) 685-8380.

Computers fill real potholes

As reported in the *Wall Street Journal* (4/15/94): A new Automated Pavement Repair Vehicle engineered by Northwestern University comes with \$400,000 worth of high-tech gear, including a 3-D, infrared-laser-vision system and two computers. The marvelous machine rumbles down the street filling potholes by sensing the size and shape of the hole and making just the right mix of rock and goo to plop into it.

Independent Florida universities save big

The University of Miami and four other private universities in Florida have signed a three-year deal with AT&T that will lower and protect long-distance telephone rates for each institution at the current level and provide other cost saving benefits through the duration of the contract.

The contract includes ACUTA members University of Miami, Stetson University, and Embry-Riddle Aeronautical University as well as Nova Southeastern University and Palm Beach Atlantic College.

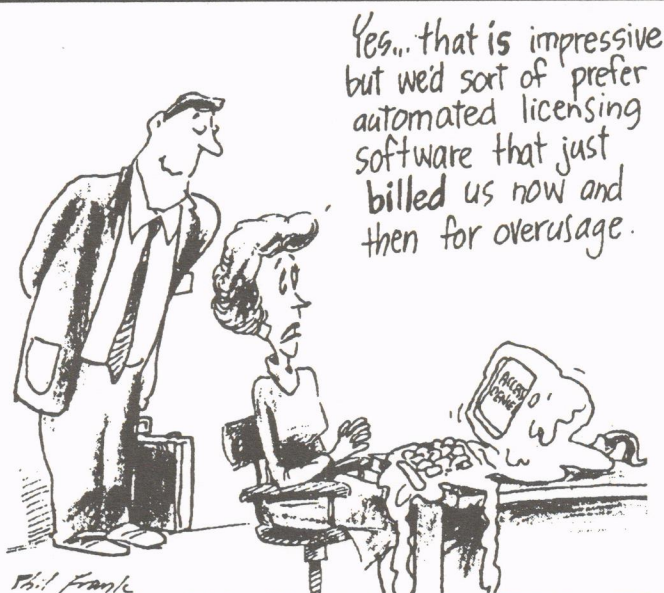
"Private non-profit institutions have been at a disadvantage on their long-distance rates because their individual calling volumes were not sufficient to warrant rate reductions," said Paul Costello, UM Director of Administration and Budget Control for Information Resources. "This contract allows each of the institutions to reduce costs by pooling long-distance call volume."

According to Randy Fairbank, AT&T general manager, the four smaller institutions will see large savings on their bills by combining with UM's much larger volume of long-distance calls. The universities expect to save approximately \$600,000 during the three-year term.

"This unique agreement allows the independent universities to participate with UM in a serious reduction of long-distance costs," said Dr. M. Lewis Temares, UM Vice President for Information Resources and Dean of the College of Engineering. "We are able to help our fellow institutions achieve with us the benefits of our large call volume."

TELETOONS

BY FRANK AND TROISE



Monograph summary and review:

ITFS LEASING PARTNERSHIPS between Educators and Wireless Cable Operators

L. Kevin Adkins

ACUTA, Telecom Resources Manager

Publisher: Western Cooperative of Educational Telecommunications. Author: Norman Wagner, Instructional Television Manager, Univ. of California, Riverside..

Cost: \$12 to Western Cooperative members and \$20 for non-members. For information, call (303) 541-0290 or fax at (303) 541-0291.

This monograph gives the wireless side of commercial television partnerships and what they can do for (or to!) your school. For those with ITFS (Instructional Television Fixed Service) systems, this document provides insight on leasing excess channel capacity. Those who do not have a system at present will find out how a leasing arrangement could get them on the air with little or no capital expenditure.

The first of the two parts of this 30-page monograph provides basic information on wireless cable and ITFS, with emphasis on the decision-making process and the important elements of leasing agreements. The second part provides additional technical information for schools who have already decided to enter a leasing agreement.

ITFS systems transmit programming from a local broadcast station using a combination of 33

available SHF (Super High Frequency) channels. Special antennas, usually small wire mesh dishes, are needed to receive the programming at the subscriber's location. The broadcast signal is microwave "line-of-sight;" that is, the path between the transmitter and receiver must be unobstructed by buildings, terrain, or dense foliage. The typical signal range is 30 to 50 miles.

20 ITFS frequencies (or channels) within the SHF band were reserved in 1963 by the FCC for use primarily by educators to deliver instructional programming in their local areas. Initial use by educators was heavy and growth was consistent until stifling budget cutbacks of the early 1980s. The FCC instituted a major policy change in 1983 authorizing ITFS systems to lease excess program time to commercial entities (wireless cable). Income from these leases could then be used to support the educational programs on the channels.

Why do wireless cable companies need you? There are only 33 channels in the SHF band which can be used for television distribution. ITFS reserves 20 of those, leaving only 13 for commercial license. Wireless cable operators need between 20 and 30 channels to be competitive with traditional, wired cable. This means that in most geographic areas, wireless operators must lease capacity from one or more educators to have sufficient channels.

Two major provisos I perceived from this monograph: The FCC mandates that a leased channel must be used "substantially" for ITFS programming and that ten years is a typical lease period. "Substantially" means 12 hours per channel per week for the first 2 years, and 20 hours per channel per week thereafter that your school must fill with educational or instructional programming. If you lease your excess channel capacity with a wireless operator, you must maintain this level of programming for the entire term of the lease, up to 10 years.

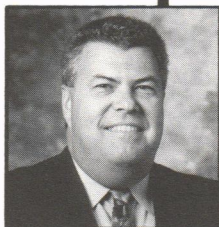
Some of the major headings in this work are:

- ITFS
- Excess Capacity Leasing
- Advantages and Disadvantages of Leasing
- Factors Related to Success (Institutional, Market, and Consortium Considerations)
- How to Identify a Wireless Cable Partner
- How to Build a Sound Lease Contract (Methods of Computing Lease Payments, Wireless Company's Perspective, and Key Contact Points)
- Looking Toward the Future (Digital Compression, Local Multipoint Distribution Service, FCC Filing Rules, and Franchise Legislation)
- Frequencies and Channels
- Channel Mapping
- Financing a Wireless Cable System

The work concludes with an excellent reference section about ITFS and leasing arrangements.

Elections...

Continued from page 1



Buck Bayliff

Robert Aylward, Associate Director of Information Technology at the University of Wyoming, has served as ACUTA Treasurer for one year. His opponent, **Jim Cross**, CIO and Director of Information Technology at Michigan Tech, has served ACUTA as Secretary for the past year.

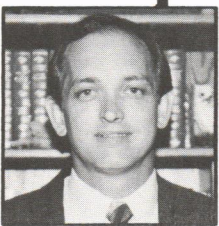
Three candidates are running for two of the new Director-at-Large positions this year, and two next year. The three candidates are:

Buck Bayliff, Director of Communication Services at Wake Forest University, who presently serves as Regional Director of Region 2; **Linda Bogden-Stubbs**, Director of Telecommunications at SUNY Health Science Center in Syracuse; and **Bill Peck**, Manager, Campus Network Services, at the University of California, San Francisco.



Linda Bogden-Stubbs

You will receive an official ballot in the mail with complete instructions. Ballots must be returned by June 24 in order to be counted. The newly elected Directors-at-Large will officially take office at the close of the Annual Conference in Anaheim August 4. Any questions regarding the candidates may be addressed to them personally; questions regarding the new bylaws should be answered by any Board member.



Bill Peck

Lost on the Information Highway?

Noel Hunter

Wake Forest University

Editor's Note: Are you up to speed on the Information Superhighway or are you staying timidly out of the traffic? Learning key words adds to our comfort level as we try new paths; it's easier to read the street signs if you know the language!

The Internet is an avenue of communication whereby information is distributed electronically. Users access a wealth of information available on the Internet, or provide information to others—on their own campus or around the world.

Gopher service is perhaps the most versatile and powerful way users can distribute information, including groups of files, quickly and easily. Documents stored on networked PCs and Macintoshes—from simple text-only files to complex desktop publishing documents and computer programs—may be distributed to a wide variety of clients over the Internet using gopher.

In addition to documents, interactive services such as questionnaires and searchable indices can also be provided. The users who read documents do not have to know anything about the computer on which the documents reside. In fact, they don't even have to know where the computer is located, because gopher provides friendly menus which help users find the information they need.

Users access gopher servers with a program called a "gopher client," available for MS-DOS, Microsoft Windows, Macintoshes, Unix machines, and many other computers. When a gopher client runs, it connects to a central server which provides a menu of all the gopher servers in the world. Servers are listed by geographic region. So, for example, to locate documents at Wake Forest University, gopher users select "North America," "United States," "North Carolina," and "Wake Forest." They then see a menu of all the gopher services registered on our campus. From there, they can see files located on the Academic Computing System (ac), as well as any other computers registered with the gopher server on ac. Finally, when users select a desired menu item, gopher reads the document from the server on which it resides.

World-Wide Web (www) service provides access to "hypertext" documents, or documents which contain embedded "links" to other documents, ideal for distributing text-based documents such as user guides, newsletters, reports, etc.

World-Wide Web can distribute text-only files, graphics files, and other types of data. A typical setup might begin with a table of contents which contains a link to each chapter. Within each chapter could be cross-references to other chapters, links to graphics files as illustrations, and a link back to the table of contents.

World-Wide Web server software currently is available for Unix machines, Macintoshes, and Windows. As with gopher, users who read www documents do not have to know anything about the computer on which the documents reside or where the computer is located, because www provides friendly menu-like listings which help them find the information they need. Like gopher, World-Wide Web has a central menu which provides a list of all the registered servers in the world.

Users access www documents with "browser" programs, available for most types of computers. When a browser program runs, it connects to the central server which contains listings of all registered servers by type, subject, and name. From there, the user can search for topics and connect to specific servers. Browsers can also be set up to connect directly to local servers. Once a local document has been viewed, additional documents may be accessed by selecting imbedded "links."

WAIS (pronounced *ways*) stands for Wide-Area Index Server. Rather than menu-based access to files, WAIS servers provide searchable indices, ideal for providing access to large archives of text-only files. To create a WAIS server, index providers gather all the documents onto a server, then run an indexing program which creates an index file. This file contains a list of all the words which appear in the documents, their frequencies of occurrence and locations. WAIS client programs access this index file to search for occurrences of the desired words.

WAIS is a very effective way of searching large groups of files. Because the index file is created and sorted in advance, it is not necessary for the client program to search the individual files each time a user makes a request. The more relevant information provided to the WAIS search, the more accurate will be its response. For example, a user might begin by looking for the words "new PC software." The user would then receive a list of all files with the word "new," the word "PC," or the word "software." The list would be ranked by the number of occurrences of each word. If, after reviewing the files, the user found a document describing "new windows word processors," the user could then include the entire text of that document as a search key.

WAIS client programs allow users to save searches so that they can be repeated later, when more information is available. Users can also search multiple indices, so that it is possible to search many sites across the Internet for one search key with one command.

The Internet has the potential to dramatically improve our access to information. Thanks to Noel Hunter for looking at three of the many vehicles by which we may travel the Information Superhighway.

21st Century Technology

AT&T proposes fiber optic ring around Africa

Africa—that giant continent in which cultures, politics, and economies exist in many stages of development—might soon be lassoed into the 21st century technologically. Addressing delegates attending the Africa Telecom '94 conference in Cairo recently, AT&T Submarine Systems President William B. Carter proposed an Africa Optical Network that would form a ring around the entire African continent, with cable landing points in countries with coastlines. Nations in the interior would link to the system via satellites, microwave, and terrestrial networks. The information network of undersea fiber optic cables would ensure that African nations don't fall behind the growth of information technology, and enable African nations to link to each other in order to provide the continent-wide telecom infrastructure needed to attract investment by multinational corporations.

Functional phones

The *Wall Street Journal* (4/13/94) reports that Motorola will offer a new pocket-size phone that combines four functions. Lingo phones function as digital wireless phones, using mobile radio frequencies for communications. In addition, the phones have a small screen that can display 16 text messages, double as a computer modem, and provide voice dispatch service.

Zap that number

From the *St. Petersburg Times* (4/25/94) we learn that Bell Atlantic will test an electronic phone book that lets hotel guests look up local business numbers on their TV screens. To dial a number, just point the remote control at a symbol on the screen. Another symbol provides a map and written directions, printed at the hotel's front desk.

Internet skills essential

Investor's Business Daily (4/14/94) says twice as many networks are connected to the Internet as last year, and a new one hooks up every 10 minutes. They quote Mark Gibbs, co-author of "Navigating the Internet," with saying familiarity with the Internet will become increasingly essential to everyday life: "Not knowing how to use the Internet will be as grave a deficiency as not knowing how to read. The Internet will become the world's primary means of communication and will soon carry more mail than the entire postal services worldwide... The Internet now connects more people, resources and services than any other communications system except for the telephone system."

Virtual reality for the disabled

Not just for entertainment and more than technology for technology's sake, virtual reality has real benefits for the disabled. For example: A Johns Hopkins project transforms the headset from a virtual reality system into a powerful magnifying tool for people with chronic vision problems, using a complex combination of lenses, mirrors, and video cameras.

Beep no more, My Lady

According to the April *Reader's Digest*, traffic is growing almost 25 times faster than roads in America. "The price tag on tie-ups is huge: The Federal Highway Administration calculates the cost of wasted time at over \$100 billion a year." The article, entitled "What Are We Waiting For?," then describes their solution: the Intelligent Vehicle and Highway Systems (IVHS), which increase a road's carrying capacity by letting cars and traffic signals "talk" to each other. If you missed the story, go to the library for a back issue, and read it to your fellow carpoolers during the next frustrating commute to the office!

Taking a first step in the direction of IVHS, the federal government is giving the Georgia Department of Transportation \$100 million to devise an Advanced Traffic Management System for the Atlanta area. According to the *Atlanta Journal-Constitution* (4/7/94), the system will use fiber optic cables along the freeways to report accidents and synchronize traffic lights.

Computer viruses infect Asia

Sharing (and pirating) computer software with friends in Asia could be dangerous to your computer's health. According to the *Wall Street Journal* (4/29/94), a U.S. antivirus company estimates the number of global viruses at 3,500 and says the total doubles every 10 months. A study conducted a year ago found 32% of computers in China were infected, 10% in Thailand, 12% in Hong Kong and Singapore, and 10% in Taiwan, compared to 6% in the U.S. and Japan.

And now for the news...

New technology from Intel and Cable News Network allows PC users to view news broadcasts in a small window on their monitor. LAN TV also can be used to distribute video announcements or training material to workers. Described in the *Wall Street Journal* (4/22/94), the system uses ordinary local area networks rather than specialized wiring or switching technologies, and compression technology that squeeze video from 30 still pictures per second down to 10 to 15 frames—leaving 97% of the network capacity free for other work.

DC at a glance

Whitney Johnson

ACUTA Regulatory & Legislative Affairs Committee

Both the Brooks-Dingell Bill (H. R. 3626—deregulation allowing phone companies to provide in-region and interstate service with no waiting period, interstate resale, and build and operate out-of-region networks) and the Markey-Fields Bill (H. R. 3636—allowing phone companies to provide in-region cable TV, requiring them to provide access to their switches, and requiring that they open networks to competitive access providers and others) will probably make it to the floor of the House for further attempts to amend them. It is possible that they may even come to a vote in the next few weeks. An interesting concern has been raised by the California League of Cities over H. R. 3636. They estimate that the bill will cost the state's cities well over \$100 million per year in lost franchise fees. Obviously, the League is encouraging city officials to work with their legislators for the defeat of or changes in the bill.

The word in Washington is that "The Administration" is proposing that the FCC become self-funding next year. That means the FCC may be required to generate their entire budget from fees collected. Both Senator Hollings and Rep.

Dingell, as well as many others in Washington, are concerned. The money saved would be used to help the states pay for the proposed "state criminal alien assistance program." While dollar figures have not been printed, costs for this will, no doubt, be dear. Currently the FCC collects around \$60 million in fees, and the budget for next year is in the range of \$170 million. The FCC's 1995 proposal has 82 additional staff members and the chairman hopes to gradually increase staff by 204 more with a goal of getting back to the staffing level of 1980 in a few years. Shall we guess how these fees will be assessed?

More next month on the Danforth-Hollings Bill S. 1822.

FCC approves interstate Caller ID and ANI

In a move that has significant privacy implications, the FCC adopted rules in March for interstate caller ID and automatic number identification (ANI).

Caller ID is a service that allows people to see a display of the phone numbers of persons who call them. The rules, which will take effect April 12, 1995, require free per-call blocking of phone numbers for all phone customers.

Caller ID is a controversial service that pits the privacy of the caller against the privacy of the person being called. Proponents say it discourages obscene and threatening callers. Many people use caller ID to identify the caller before they answer—or choose not to answer—a call.

Critics point out that identifying the number may not identify the caller. Obscene or threatening calls may be made from payphones. Another concern is that some callers, such as battered women living in shelters, may have important reasons not to reveal their phone numbers.

Certain key sequences or special devices may be available for those who do not wish their numbers to be revealed.

The FCC also approved the first rules governing use of ANI by businesses with 800 or 900 numbers. ANI provides the business with the caller's number; blocking is not available. According to the new rules, the use of numbers obtained through ANI is limited to purposes that "do not violate subscriber privacy expectations."

Companies can use the number "for call management, to complete a transaction, or to offer products and services directly related to those previously acquired by the telephone subscriber." Reuse or sale of the information for marketing purposes will be prohibited, unless the caller is informed and agrees to such use.

ACUTA Calendar

1994 ANNUAL CONFERENCE Anaheim, CA July 31–Aug. 4

HOTEL

Anaheim Hilton
TOPICS

- Management
- Regulatory Issues
- Professional Growth
- Voice, Data & Video
more

Fall Seminar Richmond, Virginia Oct. 16-19, 1994

HOTEL

Hyatt Richmond
TOPICS

- Network Planning &
Management
- Student Services

Winter Seminar Maui, Hawaii Jan. 17–21, 1995

HOTEL

Inter-Continental Resort
TOPIC

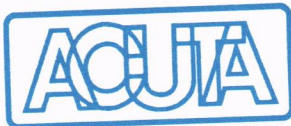
To be announced

Spring Seminar Kansas City, Missouri April 9–12, 1995

HOTEL

Hyatt Regency
TOPIC

To be announced



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Telecommunications Administrators
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Editor's Notes...

One word that would appear high on my list of words relevant to the *ACUTA News* is ownership. Do you know who "owns" the newsletter in the sense of determining the type of stories that appear each month? You do. With guidance from the Board and input from you, I just put the publication together. So the more active your role in submitting and reacting to the information that appears in print, the greater will be your ownership. Is the information you find in each issue useful and interesting? I welcome your comments and suggestions any time. If you'd like to see a topic addressed, tell me what it is. If you have a story to tell, send it in! Don't ever think your contribution would not be of interest to others. As diverse as ACUTA's membership is, you could never face a challenge unfamiliar to everyone else!

One thing I'd like to do more of is recognize those who have won awards or accolades on their own campus or in their community. (See the box called KUDOS on the right.) Don't be bashful; if you have achieved recognition, share that news with your peers. I see this as a way to get to know each other better, which can only make ACUTA a more valuable resource to us all! Or maybe you haven't received an award but you know of another member who has. In case the honoree is reluctant to toot his own horn, how about sending me the news and I'll find the details. Remember: It's *your* newsletter; make it work for *you*!...Send news and notes to Pat Scott, ACUTA Publications Editor, 152 W. Zandale, Suite 200, Lexington, KY 40503-2486.

Corrections

By now you should have received your Annual Conference materials. Since mailing this information, we have discovered three mistakes that need to be corrected:

- On the registration form within the Tour Anaheim brochure, we have printed the wrong area code for RCI. Instead of 717, Anaheim's area code is 714. Please make that correction and accept our apology for any inconvenience this may have caused.
- On the large foldout schedule, Monday's Highlight Session features Patricia Zigarmi, who is incorrectly listed as the co-author of *The One Minute Manager*. Dr. Zigarmi is actually co-author of a work entitled *Leadership and the One Minute Manager*. We regret any confusion this error may have caused.
- Our Delta discount authorization is 5% off the lowest advertised domestic fare. It is incorrectly stated as 40% off full-coach fare and 35% off flights out of Canada.

KUDOS

- ❖ Congratulations to **Buck Bayliff**, Region 2 Director and Director of Communications Services at Wake Forest for completing his MBA requirements.
- ❖ **Jim Cross**, ACUTA Secretary, has begun his new duties as CIO and Director of Information Technology at Michigan Tech in Houghton, Michigan.
- ❖ **Dave Lambert** is now Acting Vice President of Information Technology at Cornell.

Share your good news with ACUTA!

Welcome New Members

April 29–May 23, 1994

Region 2 (Southeast)

- Garrett Community College, McHenry, MD. Don Storck (301) 387-3035

Region 4 (West)

- University of California, Santa Barbara, CA. Vince Sefcik (805) 893-4182; Paul Valenzuela (805) 893-7222; Brian White (805) 893-7279.



Search for New Members continues!

Tell a friend about ACUTA

What's happening on your campus?

Over the past few months, we've heard some pretty good stories: a pig and cable roast, an ice storm that turned out to be a "real gas," how Columbia went beyond the law, and how Dartmouth did their own bill-back for some 800/900 numbers.

So what's *your* story? Tell us how you successfully handled a major crisis or averted disaster. It's just a part of *Takin' care of business!*

Remember: If you're the school with the best story, your claim to fame could take the form of an award at the Conference in July!

